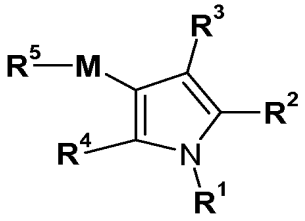
In the Claims

The listing of claims will replace all prior versions and listings of claims in the application.

Listings of claims

1. (currently amended) A method of antagonising gonadotropin releasing hormone activity in a patient, comprising administering a compound of formula (I):

~~The use of a compound of Formula (I),~~



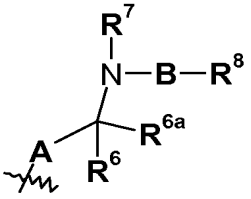
Formula (I)

wherein:

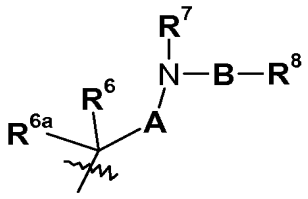
R^1 is selected from: hydrogen, optionally substituted C_{1-6}alkyl, optionally substituted aryl or optionally substituted arylC_{1-6}alkyl, wherein the optional substituents are selected from C_{1-4}alkyl, nitro, cyano, fluoro and C_{1-4}alkoxy;

R^2 is an optionally substituted mono or bi-cyclic aromatic ring, wherein the optional substituents are 1, 2 or 3 ~~subsituents~~ substituents independently selected from: cyano, R^eR^fN-, C_{1-6}alkyl, C_{1-6}alkoxy, halo, haloC_{1-6}alkyl or haloC_{1-6}alkoxy wherein R^e and R^f are independently selected from hydrogen, C_{1-6}alkyl or aryl;

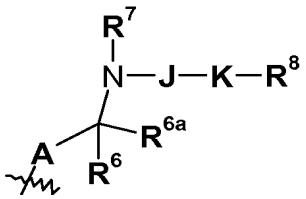
R^3 is selected from a group of Formula (IIa) to Formula (IId):



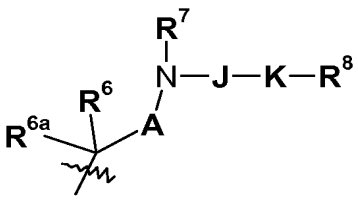
Formula (IIa)



Formula (IIb)

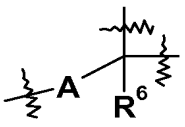


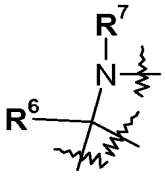
Formula (IIc)



Formula (IId)

where R^6 and R^{6a} are independently selected from hydrogen, fluoro, optionally substituted C_{1-6}alkyl, C_{1-6}alkoxy, or R^6 and R^{6a} taken together and the carbon atom to which they are attached form a carbocyclic ring of 3-7 atoms or R^6 and R^{6a} taken together and the carbon atom to which they are attached form a carbonyl group;

or when **A** is not a direct bond the group  forms a carbocyclic ring of 3-7 carbon atoms or a heterocyclic ring containing one or more heteroatoms;

or the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

$\mathbf{R^7}$ is selected from: hydrogen or C_{1-6}alkyl;

$\mathbf{R^8}$ is selected from:

(i) hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, haloC_{1-6}alkyl, C_{1-4}alkoxyC_{1-4}alkyl, hydroxy, hydroxyC_{1-6}alkyl, cyano, N-C_{1-4}alkylamino, N,N-di-C_{1-4}alkylamino, C_{1-6}alkyl–S(O_n)-, -O-$\mathbf{R^b}$, –N$\mathbf{R^b R^c}$, –C(O)-$\mathbf{R^b}$, –C(O)O-$\mathbf{R^b}$, -CON$\mathbf{R^b R^c}$, NH-C(O)-$\mathbf{R^b}$ or –S(O_n)N$\mathbf{R^b R^c}$,
where $\mathbf{R^b}$ and $\mathbf{R^c}$ are independently selected from hydrogen and C_{1-6}alkyl optionally substituted with hydroxy, amino, N-C_{1-4}alkylamino, N,N-di-C_{1-4}alkylamino, HO-C_{2-4}alkyl-NH- or HO-C_{2-4}alkyl-N(C_{1-4}alkyl)-;

(ii) nitro when **B** is a group of Formula (IV) and **X** is CH and **p** is 0;

(iii) carbocyclyl (such as C_{3-7}cycloalkyl or aryl) or arylC_{1-6}alkyl each of which is optionally substituted by $\mathbf{R^{12}}$, or $\mathbf{R^{13}}$;

(iv) heterocyclyl or heterocyclylC_{1-6}alkyl each of which is optionally substituted by up to 4 substituents independently selected from $\mathbf{R^{12}}$ or $\mathbf{R^{13}}$, and where any nitrogen atoms within a heterocyclyl group are, where chemically allowed, optionally in their oxidised (N→O, N-OH) state;

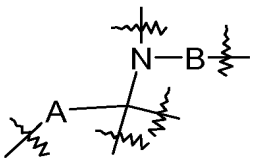
A is selected from:

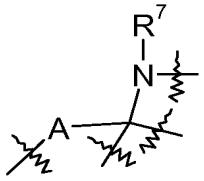
(i) a direct bond;

(ii) optionally substituted C_{1-5}alkylene wherein the optional substituents are independently selected from: hydroxy, hydroxyC_{1-6}alkyl, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-4}alkoxyC_{1-4}alkyl, aryl or arylC_{1-6}alkyl;

(iii) a carbocyclic ring of 3-7 atoms;

(iv) a carbonyl group or –C(O)–C($\mathbf{R^d R^d}$)-, wherein $\mathbf{R^d}$ is independently selected from hydrogen and C_{1-2}alkyl;

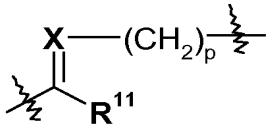
or when $\mathbf{R^3}$ is a group of Formula (IIa) or (IIb), the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

or when $\mathbf{R^3}$ is a group of Formula (IIa), (IIb), (IIc) or (IId), the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

B is selected from:

(i) a direct bond;

(ii) a group of Formula (IV)



Formula (IV)

wherein:

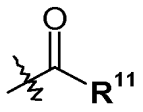
X is selected from N or CH,

wherein at position (a) Formula (IV) is attached to the nitrogen atom and the $(CH_2)_p$ group is attached to $\mathbf{R^8}$; and

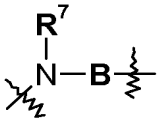
(iii) a group independently selected from: optionally substituted $C_{1\text{-}6}$alkylene, optionally substituted $C_{3\text{-}7}$cycloalkyl, optionally substituted $C_{3\text{-}6}$alkenylene, optionally substituted $C_{3\text{-}6}$alkynyl, $(C_{1\text{-}5}alkyl)_{aa}$-$S(O_n)$-$(C_{1\text{-}5}alkyl)_{bb}$-, -$(C_{1\text{-}5}alkyl)_{aa}$-O-$(C_{1\text{-}5}alkyl)_{bb}$-, -$(C_{1\text{-}5}alkyl)_{aa}$-C(O)-$(C_{1\text{-}5}alkyl)_{bb}$- or $(C_{1\text{-}5}alkyl)_{aa}$-N($\mathbf{R^{17}}$)-$(C_{1\text{-}5}alkyl)_{bb}$, or -$(C_{1\text{-}5}alkyl)_{aa}$-C(O)NH-$(C_{1\text{-}5}alkyl)_{bb}$-

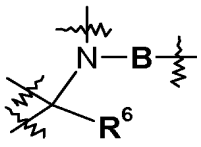
where $\mathbf{R^{17}}$ is hydrogen or $C_{1\text{-}4}$alkyl, or where $\mathbf{R^{17}}$ and the $(C_{1\text{-}5}alkyl)_{aa}$ or $(C_{1\text{-}5}alkyl)_{bb}$ chain can be joined to form a heterocyclic ring, wherein aa and bb are independently 0 or 1 and the combined length of $(C_{1\text{-}5}alkyl)_{aa}$ and $(C_{1\text{-}5}alkyl)_{bb}$ is less than or equal to C_5alkyl and wherein the optional substituents are independently selected from $\mathbf{R^{12}}$;

or the group –**B**-$\mathbf{R^8}$ represents a group of Formula (V)

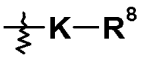


Formula (V);

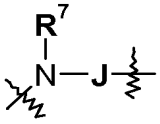
or the group  together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, wherein the optional substituents are selected from 1 or 2 substituents independently selected from $\mathbf{R^{12}}$ and $\mathbf{R^{13}}$;

or the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

$\mathbf{R^{11}}$ is selected from: hydrogen, optionally substituted $C_{1\text{-}6}$alkyl, N($\mathbf{R^{23}R^{24}}$) or NC(O)O$\mathbf{R^{25}}$, where $\mathbf{R^{23}}$, $\mathbf{R^{24}}$ and $\mathbf{R^{25}}$ are independently selected from: hydrogen, hydroxy, optionally substituted $C_{1\text{-}6}$alkyl, optionally substituted aryl, optionally substituted aryl$C_{1\text{-}6}$alkyl, an optionally substituted carbocyclic ring of 3-7 atoms, optionally substituted heterocyclyl or optionally substituted heterocyclyl$C_{1\text{-}6}$alkyl or $\mathbf{R^{23}}$ and $\mathbf{R^{24}}$ taken together with the nitrogen atom to which they are attached, can form an optionally substituted ring of 3-10 atoms,

wherein the optional substituents are selected from $\mathbf{R^{12}}$ and  where K and R^8 are as defined herein;

J is a group of the formula: -$(CH_2)_s$-**L**-$(CH_2)_s$- or -$(CH_2)_s$-C(O)-$(CH_2)_s$-**L**-$(CH_2)_s$-wherein when **s** is greater than 0, the alkylene group is optionally substituted,

or the group  together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, wherein the optional substituents are selected from 1 or 2 substituents independently selected from $\mathbf{R^{12}}$ and $\mathbf{R^{13}}$;

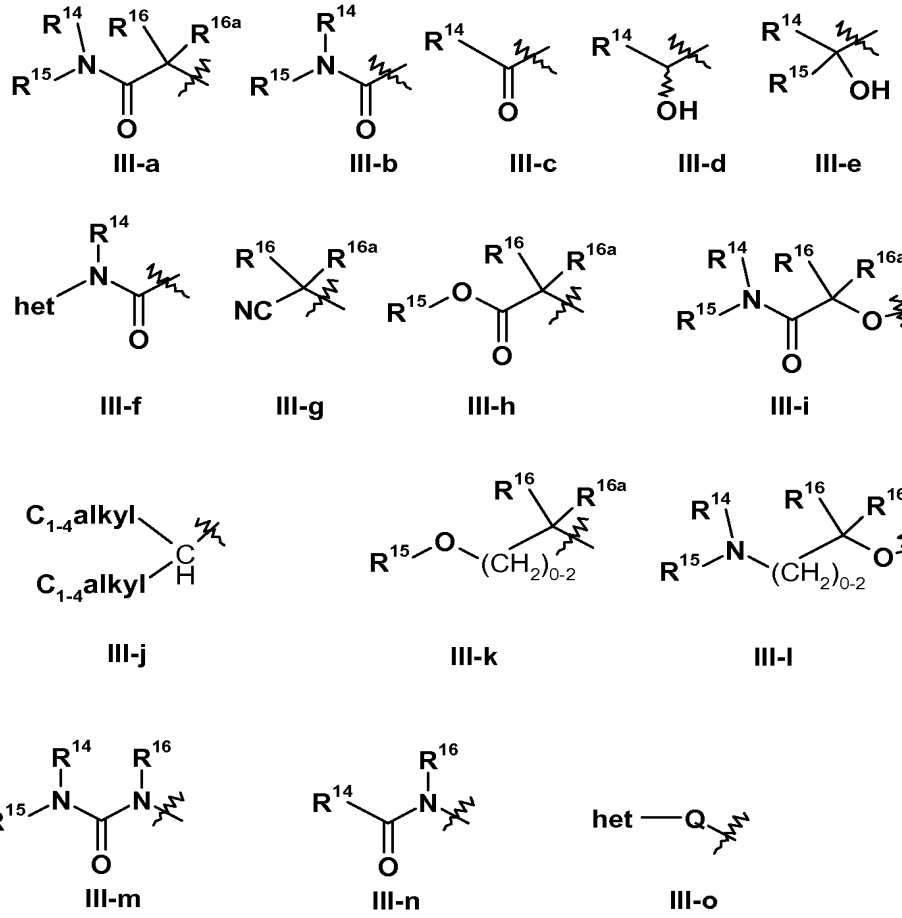
K is selected from: a direct bond, -$(CH_2)_{s1}$-, -$(CH_2)_{s1}$-O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-C(O)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-S(O_n)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-C(O)N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)C(O)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)C(O)N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-OC(O)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-C(O)O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)C(O)O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-OC(O)N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-OS(O_n)-$(CH_2)_{s2}$-, or -$(CH_2)_{s1}$-S(O_n)-O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-S(O)$_2$N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-or -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)S(O)$_2$-$(CH_2)_{s2}$-; wherein the -$(CH_2)_{s1}$- and -$(CH_2)_{s2}$- groups are independently optionally substituted by hydroxy or $C_{1\text{-}4}$alkyl and wherein when s1>1 or s2>1 then the CH_2 group can optionally be a branched chain.;

where $\mathbf{R^{17a}}$ is hydrogen or $C_{1\text{-}4}$alkyl;

L is selected from optionally substituted aryl or optionally substituted heterocyclyl;

R^4 is selected from hydrogen, C_{1-4}alkyl or halo;

R^5 is selected from a group of Formula **III-a**; **III-b**; **III-c**; **III-d**; **III-e; III-f**, **III-g** , **III-h**, **III-i**, or **III-j**, **III-k**, **III-l**, **III-m**, **III-n** or **III-o**



wherein:

het represents an optionally substituted 3- to 8-membered heterocyclic ring containing from 1 to 4 heteroatoms independently selected from O, N and S, wherein the optional substituents are selected from 1-2 groups selected from **R^{12}** and **R^{13}**; and

Q is selected from a direct bond or $-[C(\mathbf{R^{16}R^{16a}})]_{1-2}-$;

R^{14} and **R^{15}** are selected from:

(i) **R^{14}** selected from hydrogen; optionally substituted C_{1-8}alkyl; optionally substituted aryl; -**R^d**-Ar, where **R^d** represents C_{1-8}alkylene and Ar represents optionally substituted aryl; and optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S; and **R^{15}** is selected from hydrogen; optionally substituted C_{1-8}alkyl and optionally substituted aryl;

(ii) wherein the group of Formula (III) represents a group of Formula **III-a , III-b**, **III-i**, **III-l** or **III-m**, then the group N**R**^{14}(-**R**^{15}) represents an optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S; or

(iii) wherein the group of Formula (III) represents structure **III-e**,  represents an optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 4 heteroatoms independently selected from O, N and S;

R^{16} and **R**^{16a} are independently selected from:

(i) hydrogen or optionally substituted C_{1-8}alkyl; or

(ii) **R**^{16} and **R**^{16a} together with the carbon to which they are attached form an optionally substituted 3 to 7-membered cycloalkyl ring;

R^{12} is independently selected from: halo, hydroxy, hydroxyC_{1-6}alkyl, oxo, cyano, cyanoC_{1-6}alkyl, nitro, carboxyl, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkoxyC_{1-4}alkyl, C_{1-6}alkoxycarbonylC_{0-4}alkyl, C_{1-6}alkanoylC_{0-4}alkyl, C_{1-6}alkanoyloxyC_{0-4}alkyl, C_{2-6}alkenyl, C_{1-3}perfluoroalkyl-, C_{1-3}perfluoroalkoxy, aryl, arylC_{1-6}alkyl, heterocyclyl, heterocyclylC_{1-6}alkyl, aminoC_{0-4}alkyl, **N**-C_{1-4}alkylaminoC_{0-4}alkyl, **N, N**-di-C_{1-4}alkylaminoC_{0-4}alkyl, carbamoyl, **N**-C_{1-4}alkylcarbamoylC_{0-2}alkyl, **N, N**-di-C_{1-4}alkylaminocarbamoylC_{0-2}alkyl, aminocarbonylC_{0-4}alkyl, **N**-C_{1-6}alkyaminocarbonylC_{0-4}alkyl, **N, N**-C_{1-6}alkyaminocarbonylC_{0-4}alkyl, C_{1-6}alkyl-S(O)$_n$-aminoC_{0-4}alkyl-, aryl-S(O)$_n$-aminoC_{0-2}alkyl-, C_{1-3}perfluoroalkyl-S(O)$_n$-aminoC_{0-2}alkyl-; C_{1-6}alkylamino-S(O)$_n$-C_{0-2}alkyl-, arylamino-S(O)$_n$-C_{0-2}alkyl-, C_{1-3}perfluoroalkylamino-S(O)$_n$-C_{0-2}alkyl-, C_{1-6}alkanoylamino-S(O)$_n$-C_{0-2}alkyl-; arylcarbonylamino-S(O)$_n$-C_{0-2}alkyl-, C_{1-6}alkyl-S(O)$_n$-C_{0-2}alkyl-, aryl-S(O)$_n$-C_{0-2}alkyl- , C_{1-3}perfluoroalkyl-, C_{1-3}perfluoroalkoxyC_{0-2}alkyl; **R**$^{9'}$OC(O)(CH$_2$)$_w$-, **R**$^{9''}$**R**$^{10''}$N(CH$_2$)$_w$-, **R**$^{9'}$**R**$^{10'}$NC(O)(CH$_2$)$_w$-, **R**^{9}**R**^{10}NC(O)N(**R**^{9})(CH$_2$)$_w$-, **R**^{9}OC(O)N(**R**^{9})(CH$_2$)$_w$-, or halo, wherein **w** is an integer between 0 and 4 and **R**^{9} and **R**^{10} are independently selected from hydrogen, C_{1-4}alkyl, C_{1-4}alkylsulphonyl and C_{3-7}carbocyclyl, **R**$^{9'}$ and **R**$^{10'}$ are independently selected from C_{1-4}alkylsulphonyl and C_{3-7}carbocyclyl, and **R**$^{9''}$ and **R**$^{10''}$ are C_{3-7}carbocyclyl; wherein an amino group within **R**^{12} is optionally substituted by C_{1-4}alkyl;

R^{13} is C_{1-4}alkylaminocarbonyl wherein the alkyl group is optionally substituted by 1, 2 or 3 groups selected from **R**^{12}**, or R**^{13} is a group –C(O)-**R**^{18} and **R**^{18} is selected from an amino acid derivative or an amide of an amino acid derivative;

M is selected from –CH_2-CH_2- or –CH=CH-;

n is an integer from 0 to 2;

p is an integer from 0 to 4;

s, s1 and **s2** are independently selected from an integer from 0 to 4, and

s1+s2 is less than or equal to 4;

t is an integer between 0 and 4; and

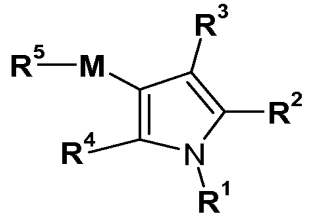
or a salt, solvate or pro-drug thereof to a patient~~, in the manufacture of a medicament for~~

~~(a) antagonising gonadotropin releasing hormone activity;~~

~~(b) administration to a patient, for reducing the secretion of luteinizing hormone by the pituitary gland of the patient; and~~

~~(c) administration to a patient, for therapeutically treating and/or preventing a sex hormone related condition in the patient~~.

2. (currently amended) A compound of formula (IA) which is a compound of formula (I)~~ as defined in claim 1,~~:



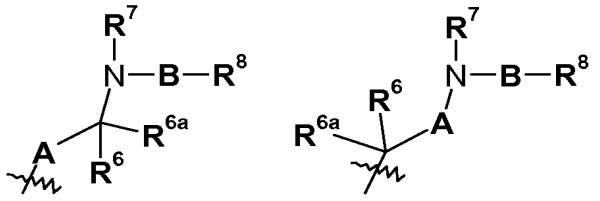
Formula (I)

wherein:

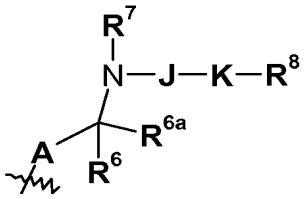
R^1 is selected from: hydrogen, optionally substituted C_{1-6}alkyl, optionally substituted aryl or optionally substituted arylC_{1-6}alkyl, wherein the optional substituents are selected from C_{1-4}alkyl, nitro, cyano, fluoro and C_{1-4}alkoxy;

R^2 is an optionally substituted mono or bi-cyclic aromatic ring, wherein the optional substituents are 1, 2 or 3 substituents independently selected from: cyano, **R^eR^f**N-, C_{1-6}alkyl, C_{1-6}alkoxy, halo, haloC_{1-6}alkyl or haloC_{1-6}alkoxy wherein **R^e** and **R^f** are independently selected from hydrogen, C_{1-6}alkyl or aryl;

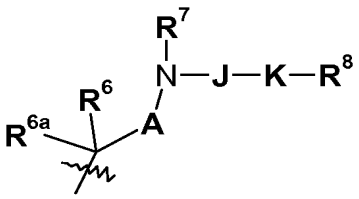
R^3 is selected from a group of Formula (IIa) to Formula (IId):



Formula (IIa) Formula (IIb)

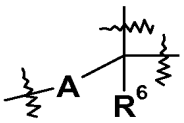


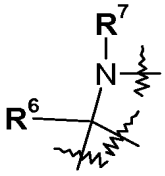
Formula (IIc)



Formula (IId)

where R^6 and R^{6a} are independently selected from hydrogen, fluoro, optionally substituted C_{1-6}alkyl, C_{1-6}alkoxy, or R^6 and R^{6a} taken together and the carbon atom to which they are attached form a carbocyclic ring of 3-7 atoms or R^6 and R^{6a} taken together and the carbon atom to which they are attached form a carbonyl group;

or when **A** is not a direct bond the group  forms a carbocyclic ring of 3-7 carbon atoms or a heterocyclic ring containing one or more heteroatoms;

or the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

R^7 is selected from: hydrogen or C_{1-6}alkyl;

R^8 is selected from:

(i) hydrogen, C_{1-6}alkyl, C_{2-6}alkenyl, C_{2-6}alkynyl, haloC_{1-6}alkyl, C_{1-4}alkoxyC_{1-4}alkyl, hydroxy, hydroxyC_{1-6}alkyl, cyano, N-C_{1-4}alkylamino, N,N-di-C_{1-4}alkylamino, C_{1-6}alkyl–S(O_n)-, -O-R^b, –N$R^b R^c$, –C(O)-R^b, –C(O)O-R^b, -CON$R^b R^c$, NH-C(O)-R^b or –S(O_n)N$R^b R^c$,

where R^b and R^c are independently selected from hydrogen and C_{1-6}alkyl optionally substituted with hydroxy, amino, N-C_{1-4}alkylamino, N,N-di-C_{1-4}alkylamino, HO-C_{2-4}alkyl-NH- or HO-C_{2-4}alkyl-N(C_{1-4}alkyl)-;

(ii) nitro when **B** is a group of Formula (IV) and **X** is CH and **p** is 0;

(iii) carbocyclyl (such as C_{3-7}cycloalkyl or aryl) or arylC_{1-6}alkyl each of which is optionally substituted by R^{12}, or R^{13};

(iv) heterocyclyl or heterocyclylC_{1-6}alkyl each of which is optionally substituted by up to 4 substituents independently selected from R^{12} or R^{13}, and where any nitrogen atoms within a heterocyclyl group are, where chemically allowed, optionally in their oxidised (N→O, N-OH) state;

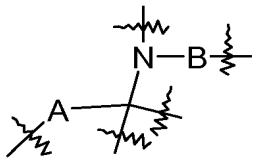
A is selected from:

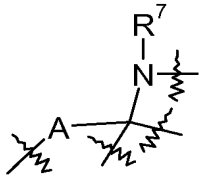
(i) a direct bond;

(ii) optionally substituted C_{1-5}alkylene wherein the optional substituents are independently selected from: hydroxy, hydroxyC_{1-6}alkyl, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-4}alkoxyC_{1-4}alkyl, aryl or arylC_{1-6}alkyl;

(iii) a carbocyclic ring of 3-7 atoms;

(iv) a carbonyl group or –C(O)–C($\mathbf{R^d R^d}$)-, wherein $\mathbf{R^d}$ is independently selected from hydrogen and C_{1-2}alkyl;

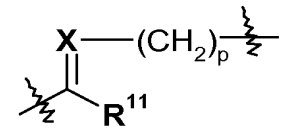
or when $\mathbf{R^3}$ is a group of Formula (IIa) or (IIb), the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

or when $\mathbf{R^3}$ is a group of Formula (IIa), (IIb), (IIc) or (IId), the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

B is selected from:

(i) a direct bond;

(ii) a group of Formula (IV)



Formula (IV)

wherein:

X is selected from N or CH,

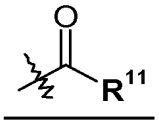
wherein at position (a) Formula (IV) is attached to the nitrogen atom and the $(CH_2)_p$ group is attached to $\mathbf{R^8}$; and

(iii) a group independently selected from: optionally substituted C_{1-6}alkylene, optionally substituted C_{3-7}cycloalkyl, optionally substituted C_{3-6}alkenylene, optionally substituted C_{3-6}alkynyl, $(C_{1-5}alkyl)_{aa}$-$S(O_n)$-$(C_{1-5}alkyl)_{bb}$-, -$(C_{1-5}alkyl)_{aa}$-O-$(C_{1-5}alkyl)_{bb}$-, -$(C_{1-5}alkyl)_{aa}$-C(O)-$(C_{1-5}alkyl)_{bb}$- or $(C_{1-5}alkyl)_{aa}$-N($\mathbf{R^{17}}$)-$(C_{1-5}alkyl)_{bb}$, or -$(C_{1-5}alkyl)_{aa}$-C(O)NH-$(C_{1-5}alkyl)_{bb}$-

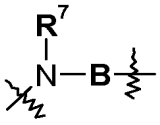
where $\mathbf{R^{17}}$ is hydrogen or C_{1-4}alkyl, or where $\mathbf{R^{17}}$ and the $(C_{1-5}alkyl)_{aa}$ or $(C_{1-5}alkyl)_{bb}$ chain can be joined to form a heterocyclic ring, wherein aa and bb are independently 0 or 1

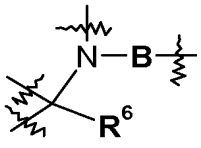
and the combined length of $(C_{1-5}alkyl)_{aa}$ and $(C_{1-5}alkyl)_{bb}$ is less than or equal to C_5alkyl and wherein the optional substituents are independently selected from $\mathbf{R^{12}}$;

or the group $-\mathbf{B}\text{-}\mathbf{R^8}$ represents a group of Formula (V)

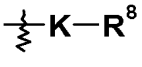


Formula (V);

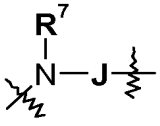
or the group  together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, wherein the optional substituents are selected from 1 or 2 substituents independently selected from $\mathbf{R^{12}}$ and $\mathbf{R^{13}}$;

or the group  forms a heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms;

$\mathbf{R^{11}}$ is selected from: hydrogen, optionally substituted $C_{1-6}alkyl$, $N(\mathbf{R^{23}}\mathbf{R^{24}})$ or $NC(O)O\mathbf{R^{25}}$, where $\mathbf{R^{23}}$, $\mathbf{R^{24}}$ and $\mathbf{R^{25}}$ are independently selected from: hydrogen, hydroxy, optionally substituted $C_{1-6}alkyl$, optionally substituted aryl, optionally substituted $arylC_{1-6}alkyl$, an optionally substituted carbocyclic ring of 3-7 atoms, optionally substituted heterocyclyl or optionally substituted $heterocyclylC_{1-6}alkyl$ or $\mathbf{R^{23}}$ and $\mathbf{R^{24}}$ taken together with the nitrogen atom to which they are attached, can form an optionally substituted ring of 3-10 atoms,

wherein the optional substituents are selected from $\mathbf{R^{12}}$ and  where K and R^8 are as defined herein;

J is a group of the formula: $-(CH_2)_s\text{-}\mathbf{L}\text{-}(CH_2)_s-$ or $-(CH_2)_s\text{-}C(O)\text{-}(CH_2)_s\text{-}\mathbf{L}\text{-}(CH_2)_s-$wherein when **s** is greater than 0, the alkylene group is optionally substituted,

or the group  together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, wherein the optional substituents are selected from 1 or 2 substituents independently selected from $\mathbf{R^{12}}$ and $\mathbf{R^{13}}$;

K is selected from: a direct bond, $-(CH_2)_{s1}-$, $-(CH_2)_{s1}\text{-}O\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}C(O)\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}S(O_n)\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}N(\mathbf{R^{17a}})\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}C(O)N(\mathbf{R^{17a}})\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}N(\mathbf{R^{17a}})C(O)\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}N(\mathbf{R^{17a}})C(O)N(\mathbf{R^{17a}})\text{-}(CH_2)_{s2}-$, $-(CH_2)_{s1}\text{-}OC(O)\text{-}(CH_2)_{s2}-$,

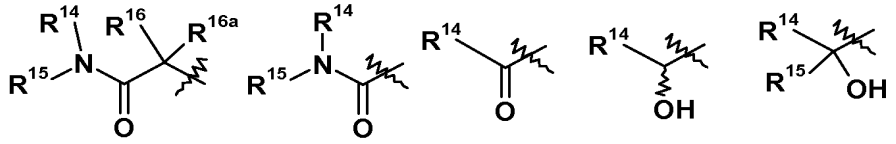
-$(CH_2)_{s1}$-C(O)O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)C(O)O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-OC(O)N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-OS(O_n)-$(CH_2)_{s2}$-, or -$(CH_2)_{s1}$-S(O_n)-O-$(CH_2)_{s2}$-, -$(CH_2)_{s1}$-S(O)$_2$N($\mathbf{R^{17a}}$)-$(CH_2)_{s2}$-or -$(CH_2)_{s1}$-N($\mathbf{R^{17a}}$)S(O)$_2$-$(CH_2)_{s2}$-; wherein the -$(CH_2)_{s1}$- and -$(CH_2)_{s2}$- groups are independently optionally substituted by hydroxy or C_{1-4}alkyl and wherein when s1>1 or s2>1 then the CH_2 group can optionally be a branched chain.;

where $\mathbf{R^{17a}}$ is hydrogen or C_{1-4}alkyl;

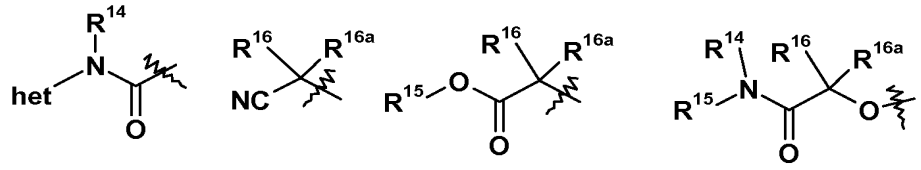
L is selected from optionally substituted aryl or optionally substituted heterocyclyl;

$\mathbf{R^4}$ is selected from hydrogen, C_{1-4}alkyl or halo;

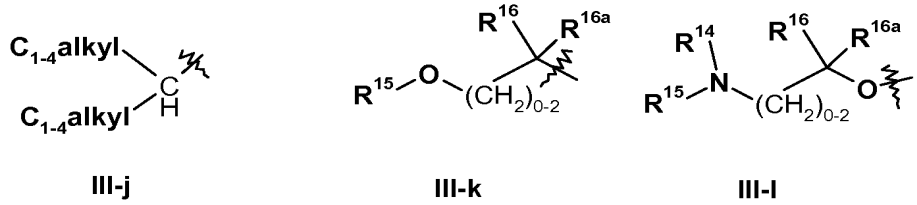
$\mathbf{R^5}$ is selected from a group of Formula **III-a**; **III-b**; **III-c**; **III-d**; **III-e**; **III-f**, **III-g** , **III-h**, **III-i**, or **III-j**, **III-k**, **III-l**, **III-m**, **III-n** or **III-o**



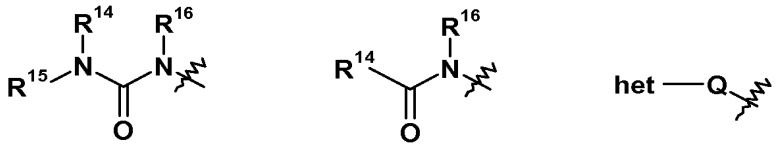
III-a **III-b** **III-c** **III-d** **III-e**



III-f **III-g** **III-h** **III-i**



III-j **III-k** **III-l**



III-m **III-n** **III-o**

wherein:

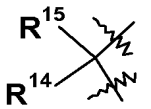
het represents an optionally substituted 3- to 8-membered heterocyclic ring containing from 1 to 4 heteroatoms independently selected from O, N and S, wherein the optional substituents are selected from 1-2 groups selected from $\mathbf{R^{12}}$ and $\mathbf{R^{13}}$; and

Q is selected from a direct bond or –[C($\mathbf{R^{16}R^{16a}}$)]$_{1-2}$-;

R^{14} and **R^{15}** are selected from:

(i) **R^{14}** selected from hydrogen; optionally substituted C_{1-8}alkyl; optionally substituted aryl; -**R^{d}**-Ar, where **R^{d}** represents C_{1-8}alkylene and Ar represents optionally substituted aryl; and optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S; and **R^{15}** is selected from hydrogen; optionally substituted C_{1-8}alkyl and optionally substituted aryl;

(ii) wherein the group of Formula (III) represents a group of Formula **III-a** , **III-b**, **III-i**, **III-l** or **III-m**, then the group N**R^{14}**(-**R^{15}**) represents an optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 3 further heteroatoms independently selected from O, N and S; or

(iii) wherein the group of Formula (III) represents structure **III-e**,  represents an optionally substituted 3- to 8-membered heterocyclic ring optionally containing from 1 to 4 heteroatoms independently selected from O, N and S;

R^{16} and **R^{16a}** are independently selected from:

(i) hydrogen or optionally substituted C_{1-8}alkyl; or

(ii) **R^{16}** and **R^{16a}** together with the carbon to which they are attached form an optionally substituted 3 to 7-membered cycloalkyl ring;

R^{12} is independently selected from: halo, hydroxy, hydroxyC_{1-6}alkyl, oxo, cyano, cyanoC_{1-6}alkyl, nitro, carboxyl, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-6}alkoxyC_{1-4}alkyl, C_{1-6}alkoxycarbonylC_{0-4}alkyl, C_{1-6}alkanoylC_{0-4}alkyl, C_{1-6}alkanoyloxyC_{0-4}alkyl, C_{2-6}alkenyl, C_{1-3}perfluoroalkyl-, C_{1-3}perfluoroalkoxy, aryl, arylC_{1-6}alkyl, heterocyclyl, heterocyclylC_{1-6}alkyl, aminoC_{0-4}alkyl, **N**-C_{1-4}alkylaminoC_{0-4}alkyl, **N, N**-di-C_{1-4}alkylaminoC_{0-4}alkyl, carbamoyl, **N**-C_{1-4}alkylcarbamoylC_{0-2}alkyl, **N, N**-di-C_{1-4}alkylaminocarbamoylC_{0-2}alkyl, aminocarbonylC_{0-4}alkyl, **N**-C_{1-6}alkyaminocarbonylC_{0-4}alkyl, **N, N**-C_{1-6}alkyaminocarbonylC_{0-4}alkyl, C_{1-6}alkyl-S(O)$_n$-aminoC_{0-4}alkyl-, aryl-S(O)$_n$-aminoC_{0-2}alkyl-, C_{1-3}perfluoroalkyl-S(O)$_n$-aminoC_{0-2}alkyl-; C_{1-6}alkylamino-S(O)$_n$-C_{0-2}alkyl-, arylamino-S(O)$_n$-C_{0-2}alkyl-, C_{1-3}perfluoroalkylamino-S(O)$_n$-C_{0-2}alkyl-, C_{1-6}alkanoylamino-S(O)$_n$-C_{0-2}alkyl-; arylcarbonylamino-S(O)$_n$-C_{0-2}alkyl-, C_{1-6}alkyl-S(O)$_n$-C_{0-2}alkyl-, aryl-S(O)$_n$-C_{0-2}alkyl- , C_{1-3}perfluoroalkyl-, C_{1-3}perfluoroalkoxyC_{0-2}alkyl; **$R^{9'}$**OC(O)$(CH_2)_w$-, **$R^{9''}R^{10''}$**N$(CH_2)_w$-, **$R^{9'}R^{10'}$**NC(O)$(CH_2)_w$-, **$R^{9}R^{10}$**NC(O)N(**R^{9}**)$(CH_2)_w$-, **R^{9}**OC(O)N(**R^{9}**)$(CH_2)_w$-, or halo, wherein **w** is an integer between 0 and 4 and **R^{9}** and **R^{10}** are independently selected from hydrogen, C_{1-4}alkyl,

C_{1-4}alkylsulphonyl and C_{3-7}carbocyclyl, $R^{9'}$ and $R^{10'}$ are independently selected from C_{1-4}alkylsulphonyl and C_{3-7}carbocyclyl, and $R^{9''}$ and $R^{10''}$ are C_{3-7}carbocyclyl; wherein an amino group within R^{12} is optionally substituted by C_{1-4}alkyl;

R^{13} is C_{1-4}alkylaminocarbonyl wherein the alkyl group is optionally substituted by 1, 2 or 3 groups selected from R^{12}, or R^{13} is a group –C(O)-R^{18} and R^{18} is selected from an amino acid derivative or an amide of an amino acid derivative;

M is selected from $–CH_2-CH_2-$ or –CH=CH-;

n is an integer from 0 to 2;

p is an integer from 0 to 4;

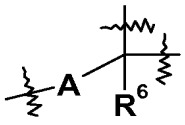
s, s1 and **s2** are independently selected from an integer from 0 to 4, and

s1+s2 is less than or equal to 4;

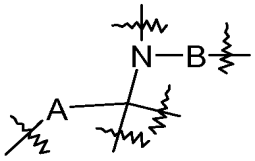
t is an integer between 0 and 4; and

or a salt, solvate or pro-drug thereof;

with the proviso that when

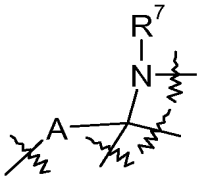
(i) the group 

forms an aromatic carbocyclic ring of 3-7 carbon atoms or an aromatic heterocyclic ring containing one or more heteroatoms, or

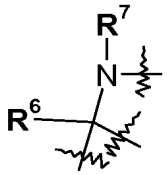
(ii) when R^3 is a group of Formula (IIa) or (IIb), and the group 

forms an aromatic heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms; or

(iii) when R^3 is a group of Formula (IIa), (IIb), (IIc) or (IId), and the group



forms an aromatic heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms, or



(iv) when the group forms an aromatic heterocyclic ring containing 3-7 carbon atoms and one or more heteroatoms and A is a direct bond;

then R^5 is other than a group III-o.

3. (original) A compound according to claim 2 wherein the group **A** is selected from (i) a direct bond or (ii) optionally substituted C_{1-5}alkylene wherein the optional substituents are independently selected from: hydroxy, hydroxyC_{1-6}alkyl, C_{1-6}alkyl, C_{1-6}alkoxy, C_{1-4}alkoxyC_{1-4}alkyl, aryl or arylC_{1-6}alkyl.

4. (currently amended) A compound according to claim 2 ~~or claim 3~~ which includes a group $\mathbf{R^{13}}$ and wherein the group $\mathbf{R^{13}}$ is –C(O)-$\mathbf{R^{18}}$, and $\mathbf{R^{18}}$ is selected from an amino acid derivative or an amide of an amino acid derivative; or a salt, solvate or pro-drug thereof.

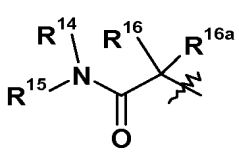
5. (currently amended) A compound according to claim 2 ~~any one of claims 2 to 4~~ wherein $\mathbf{R^1}$ is selected from hydrogen, optionally substituted C_{1-6}alkyl or optionally substituted arylC_{1-6}alkyl, wherein the optional substituents ~~substitutuents~~ are selected from: fluoro and C_{1-4}alkoxy.

6. (currently amended) A compound according to claim 2 ~~any one of claims 2 to 5~~ wherein $\mathbf{R^2}$ is phenyl, optionally substituted ~~susbstituted~~ by one or more groups selected from methyl, ethyl, methoxy, ethoxy, *tert*-butoxy, F or Cl.

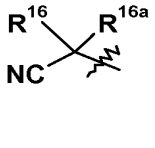
7. (currently amended) A compound according to claim 2 ~~any one of claims 2 to 6~~ wherein $\mathbf{R^3}$ is selected from a group of formula (IIc) or formula (IId).

8. (currently amended) A compound according to claim 2 ~~any one of claims 2 to 7~~ wherein $\mathbf{R^4}$ is selected from hydrogen, methyl, ethyl, chloro or bromo.

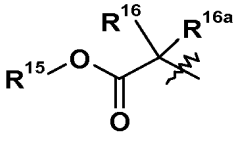
9. (currently amended) A compound according to claim 2 ~~any one of claims 2 to 8~~ wherein $\mathbf{R^5}$ is selected from a group of Formula **III-a** , **III-g**, **III-h**, **III-i**, **III-j**, **III-k** , **III-l**: or **III-o**



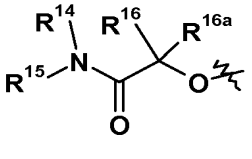
III-a



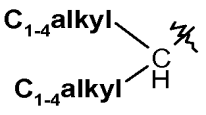
III-g



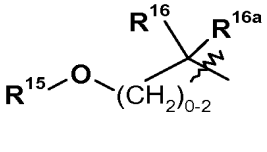
III-h



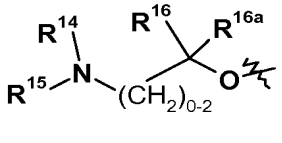
III-i



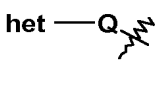
III-j



III-k



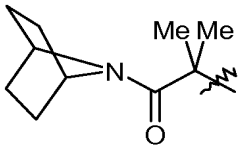
III-l



III-o

wherein $\mathbf{R^{16}}$, $\mathbf{R^{16a}}$, $\mathbf{R^{14}}$ and $\mathbf{R^{15}}$ are as defined in claim 2[[1]].

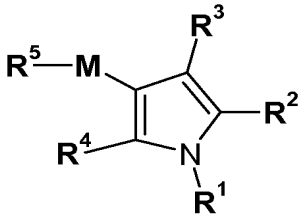
10. (original) A compound according to claim 9 wherein R^5 is a group of formula



.

11. (currently amended) A compound according to claim 2 ~~any one of claims 2 to 10~~ wherein **M** is $-CH_2-CH_2-$.

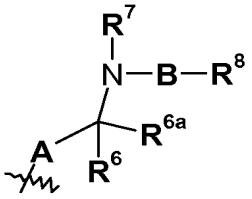
12. (currently amended) A compound of Formula (Ia) as claimed in claim 2



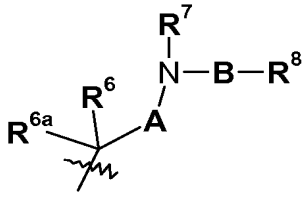
Formula (Ia)

wherein:

R^3 is selected from a group of Formula (IIa) or Formula (IIb):



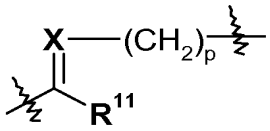
Formula (IIa)



Formula (IIb)

R^7 is selected from: hydrogen or C_{1-6}alkyl;

B is a group of Formula (IV)

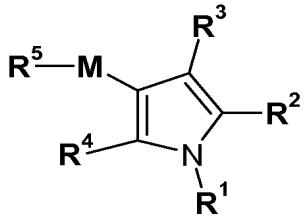


Formula (IV)

and p, **A**, X, **M**, **R^1**, **R^2**, **R^4**, **R^5** **R^6**, **R^{6a}**, **R^8**, and **R^{11}** are as defined in claim 2~~above for a compound of Formula (I)~~

or a salt, solvate or pro-drug thereof.

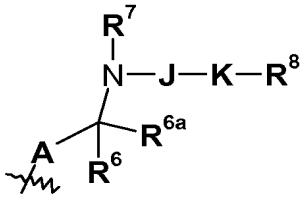
13. (currently amended) A compound of Formula (Ic) which is a compound of formula (Ia) as claimed in claim 2 wherein:



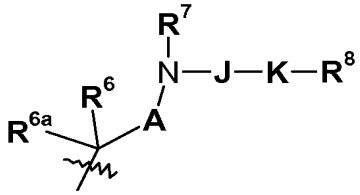
Formula (Ic)

wherein:

R^3 is selected from a group of Formula (IIc) or Formula (IId):

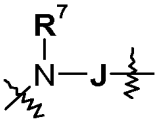


Formula (IIc)



Formula (IId)

wherein

the group  together forms an optionally substituted heterocyclic ring containing 4-7 carbons atoms, wherein the optional substituents are selected from 1 or 2 substituents independently selected from R^{12} and R^{13};

and **A**, **M**, **J**, R^1, R^2, R^4, R^5 R^6, R^{6a}, R^8, and R^{12} and R^{13} are as defined in claim 2[[1]], or a salt, solvate or pro-drug thereof.

14. (currently amended) A compound selected from:

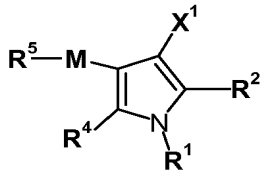
3-[3,3-dimethyl~~Dimethyl~~-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[2-{4-(morpholin-4-ylcarbonyl)piperidin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-1H-pyrrole;

3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)but-2-en-1-yl]-4-[1s-methyl-2-(n'-isopropoxycarbonyl-3-pyrid-4-yl-pyrrolidin-1-ylcarboximidamido) ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;

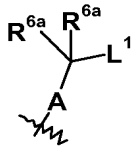
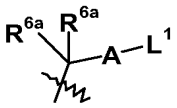
3-[3,3- dimethyl~~Dimethyl~~-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[1S-methyl-2-(N'-isopropoxycarbonyl-3-pyrid-4-yl-pyrrolidin-1-ylcarboximidamido) ethyl]-5-(3,5-dimethylphenyl)-1H-pyrrole;
3-[3,3- dimethyl~~Dimethyl~~-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[2-{4-(pyrrolidin-1-ylcarbonyl)piperazin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-1H-pyrrole;
2-chloro-3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[2-{4-(pyrrolidin-1-ylcarbonyl)piperazin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[2-{4-(4-hydroxypiperidin-1-ylcarbonyl)piperidin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[2-{4-(1,1-dioxo-isothiazolidin-2-ylcarbonyl)-4-methoxy-piperidin-1-yl}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[1s-methyl-2-{1-benzyl-pyrrodin-3-ylamino}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[1s-methyl-2-(2-{4-n-isopropylureidophenyl}ethylamino)ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[1s-methyl-2-{4-(pyrid-4-yl)piperidin-1-ylcarbonylamino}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole;
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[1s-methyl-2-{3-(pyrid-4-yl)ppyrrolidin-1-ylcarbonylamino}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole; and
3-[3,3-dimethyl-4-oxo-4-(azabicyclo[2.2.1]heptan-7-yl)butyl]-4-[1s-methyl-2-{4-phenylpiperidin-1-ylcarbonylamino}ethyl]-5-(3,5-dimethylphenyl)-1h-pyrrole.

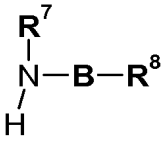
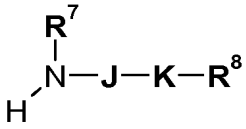
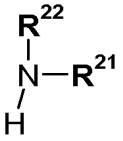
15. (currently amended) A process for preparing a compound of formula (I) as defined in claim 2 ~~1, or a compound according to any one of claims 2 to 14,~~ said process comprising a step selected from (a) to (h):

(a) reaction of a compound of formula **XXXII** with a compound of formula H-**R**$^{3'}$,

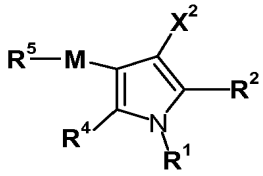


XXXII

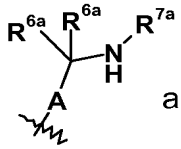
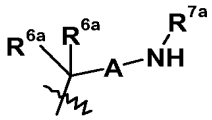
wherein $\mathbf{X^1}$ is selected from:  and  ; $\mathbf{L^1}$ is a displaceable group; and

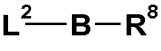
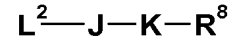
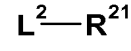
$\mathbf{H\text{-}R^{3'}}$ is selected from:  ,  and  ;

(b) reaction of a compound of formula **XXXIII** with a compound of formula $\mathbf{L^2\text{-}R^{3''}}$,



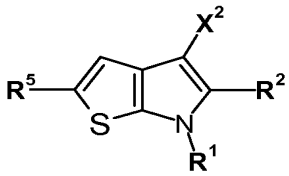
XXXIII

wherein $\mathbf{X^2}$ is selected from:  and  ; $\mathbf{L^2}$ is a displaceable group and $\mathbf{R^{7a}}$ is selected from the definition of $\mathbf{R^7}$ or $\mathbf{R^{22}}$ above, and

$\mathbf{L^2\text{-}R^{3''}}$ is selected from:  ,  and 

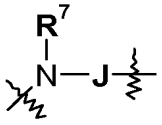
(c) for compounds of Formula (I) or (IA) wherein $\mathbf{R^7}$ is other than part of a heterocyclic ring or hydrogen, reaction of a compound of Formula (I) or (IA) wherein $\mathbf{R^3}$ is a group of Formula (IIa), (IIb), (IIc) or (IId) and $\mathbf{R^7}$ is hydrogen with a group of formula $\mathbf{L^3\text{-}R^{7a}}$, wherein $\mathbf{R^{7a}}$ is as defined above for $\mathbf{R^7}$ with the exclusion of hydrogen and $\mathbf{L^3}$ is a displaceable group;

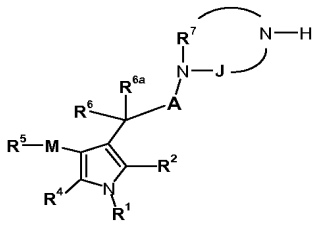
(d) for compounds of Formula (I) or (IA) wherein $\mathbf{R^4}$ is hydrogen, reduction of a thienopyrrole of Formula XXXVIII



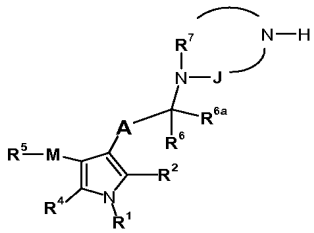
XXXVII

(e) for compounds of Formula (I) wherein $\mathbf{R^3}$ is a group of Formula (IIc) or (IId) and

the group  together forms an optionally substituted nitrogen-containing heterocyclic ring containing 4-7 carbons atoms, reaction of a compound of Formula **XXXIVa** or **XXXIVb**, with a compound of Formula L^6-K-R^8, wherein L^6 is a displaceable group

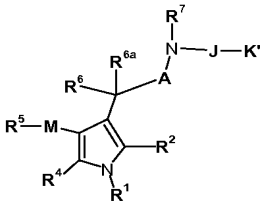


XXXIVa

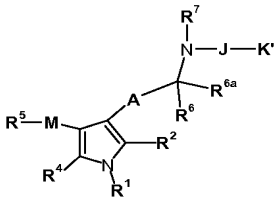


XXXIVb

(f) for compounds of Formula (I) wherein R^3 is a group of Formula (IIc) or (IId), reaction of a compound of Formula **XXXVa** or **XXXVb**, with a compound of Formula L^7-K''-R^8, wherein L^7 is a displaceable group, and wherein the groups **K'** and **K''** comprise groups which when reacted together form **K**,

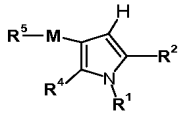


XXXVa



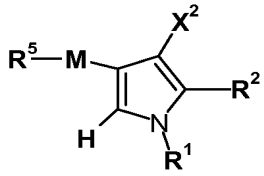
XXXVb ;

(g) reaction of a compound of Formula **XXXVI** with an electrophillic compound of the formula L^8-R^3 , wherein L^8 is a displaceable group



XXXVI

(h) reaction of a compound of Formula XXXIX with an appropriate electrophilic reagent to give a compounds of Formula (I)



XXXIX

and thereafter if necessary, carrying out one or more of the following steps:

i) converting a compound of the Formula (I) into another compound of the Formula (I);

ii) removing any protecting groups;

iii) forming a salt, pro-drug or solvate.

16. (currently amended) A pharmaceutical formulation comprising a compound according to claim 2 ~~any one of claims 2 to 14~~, or salt, pro-drug or solvate thereof, and a pharmaceutically acceptable diluent or carrier.

17-18. (cancelled)